

**FAX**

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## REMARKS:

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3-5-03

February 19, 2003

Jonathan Ouellette  
US Patent Office  
Art Unit: 3629

Dear Mr. Ouellette:

Thank you for your review of my patent application [09/808/650]. I am in receipt of the DETAILED ACTION document you forwarded to my lawyer which contains a rejection of the application. What follows is an attempt to clarify the nature, purpose, and practical utility of my invention. I am forwarding these clarifications to you in advance of our meeting scheduled for March 3, 2003 at 1:00 PM. I very much look forward to meeting with you, and appreciate the time and consideration given to my application. If, in your view, the content of this document does not provide a minimal basis for further discussion, please let me know before the our scheduled meeting.

**Enchanted Learning's Use of the W Hinge**

I am the inventor of the cited W hinge—US Patent 4,555,236—which is still in force. If this is “the puppetry-based system” which you reference in the DETAILED ACTION as “anticipated by Enchanted Learning,” then I would respectfully submit that claim is incorrect. Prior to its appearance on the Enchanted Learning web site, the W hinge has been a unique feature and patent associated with Puppetools and used on the original Puppetools web site from about 1995 until present. The patent was awarded in 1985. I would submit, also, that Enchanted Learning's single reference to the hinge does not present the comprehensive system of communication put forth in my patent application.

**Standard Features of Educational Web Sites**

Today, almost any educational web site contains the computer environment described on page 3 of the DETAILED ACTION. Whether we are talking about the paper W hinge, origami folding, or the web-based combination of server, network, and database, the idea of printing or downloading images or documents is now standard fare.

**Using Standard Features to Achieve Unobvious Results**

The Puppetry-Based Communication System uses conventional web-based resources to facilitate the manufacture, generation, and distribution of play energy—a practical kind of “solar” energy for learning that is unanticipated. Play energy is as real and as physical as other forms of energy. It has the capacity to attract and move and to facilitate communication.

The Puppetry-Based Communication System uses communicative agents of nature—namely paper puppets—to carry play energy and communication into the hands of users through web technology in a sustained and systematic way that has not been anticipated.

**A Communication System Based on Principles of Brain Science**

The Puppetry-Based Communication System uses principles of play inherent in brain function and physiology as a model of web-based communication and training.

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### **The Technological Mouse and the Symbolic Puppet Mouse**

In the same way that the structures within our brains have evolved in proximity to one another to invite the playful leaping back and forth of electrical energy in the synapses, artifacts such as the hand puppet and the computer mouse are just far enough at hand to allow a similar jump of impulses. Whether computer mouse or puppet mouse, the communicating entities move back and forth and communicate in a process that bootstraps, reinforces, and enhances inner and outer sensory connectivity and interaction. However, in the case of the hand puppet mouse, the computer-bound entity can, via print, make its way off the computer and, with simple construction, into the hand specifically for use in learning and playful communication.

### **The Puppet Mouse and Robust Play Behavior**

While it is true that children play with all kinds of artifacts that are often made to move and talk, the focus is on the development of a training system capable of being developed, sustained, and systematically applied in school settings as a medium of mass communication. Despite the fact that artifacts of play are found everywhere, play behavior in learning settings is declining. Similarly, the common appearance of printable artifacts on web sites does not necessarily mean that they will be used. Therefore, to promote the use of such artifacts in a sustained way, it is necessary to provide a comprehensive system of tools reinforced with access, modeling, and feedback.

Based on 30 years of success in random, isolated trial and error in classrooms and workshops, the Puppetry-Based Communication System carries the potential for meme-based behaviors that spread through large populations in a given culture. A case in point is the 'open and close mouth' gesture made with the hand now popular throughout (appropriately!) Italy. The gesture means, "I'll talk to you soon on the cell phone." It is a form of non-verbal display language that emanated from the appeal and hand-actuated use of the plastic clamshell case on the Motorola cell phone. In this particular example, the gesture is a signal, a non-verbal form of display language, a communicative behavior that emanates from the reptilian brain formation in human beings. The Puppetry-Based Communication System harnesses this and host of other verbal and nonverbal communication behaviors.

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**Play Science + Paper Media + Puppetry Media + Web-Based Communication = A Novel Communication System Capable of Unfolding a Visual, Emotive, Hand-based Pathway into Learning, and Useful for Solving Problems Associated with Learning**

The Puppetry-Based Communication System is based on the integration of components of the above formula. The purpose and function of each component is described below.

## Play and Puppet Science

1. The inventor, Jeffrey Peyton, is an associate research scientist at The Britton Chance Laboratory, University of Pennsylvania School of Medicine. This major brain science laboratory is sponsoring brain imaging research on puppet media and play behavior.  
[http://www.med.upenn.edu/bmbgrad/Faculty/Master\\_List/Chance/chance.html](http://www.med.upenn.edu/bmbgrad/Faculty/Master_List/Chance/chance.html)

2. Mr. Peyton's pursuit of play and communication—and the attempt to mainstream play-based language and communication—breaks new scientific ground. The potential value of such a system is expressed in the words of Paul D. MacLean, Senior Research Scientist Emeritus, Department of Neurophysiology, National Institutes of Mental Health.

*"In view of the prominence of play among mammals and its civilizing influence in human evolution, it is curious that it has received so little attention in neurobehavioral research. In one handbook of experimental psychology, for example, the subject of play is dealt with in less than a page, and in a three-volume handbook of neurophysiology, there is no reference to play."*

3. Harvard scientist E.O. Wilson, whose work on ant communication was awarded the Pulitzer prize, identifies Art as a genetically based product of evolution and an 'agent of nature' whose purpose is to transmit, sensitize, and communicate sensory information useful for species survival. The inventor's work has identified puppet art, play, and communication as a bio-media unique to human beings—a medium that works on a wavelength which children relate to psychobiologically.

## Paper Media

The successful use and generation of this energy through web-based activity achieves a shift to an unobvious, visual, emotive, play-driven level of communication. The use of paper is key to making the shift/

While the use of paper in making puppets is not new, the Puppetry-Based Communication System uses paper as a 'communication currency.' This changes the use of a puppet from a one-of-a-kind artifact into a web-based product of singular or duplicable paper life forms that 'carry' play energy and communication. This application of puppet media is novel and untried.

This use of paper W hinge by the Puppetry-Based Communication System uses play energy (the same way oil is burned to generate electricity) to move the conventional use of print, paper, and associated literal, left-brain thinking to a more visual, and emotive 'grade' of communication. Play changes, chemically and biologically, the conventional ways we communicate.

The Puppetry-Based Communication System enables art-based life forms to enter the communication mainstream. This can be accomplished by strategically positioning printed puppet parts (that can be quickly assembled using the W hinge) inside or near existing culture carriers such as story books and computers that are routinely picked up and used by hand.

The resulting communicative play behavior itself—on a consistent and robust basis—is the end product.

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**Paper Folding—Origami/**

[RE: Japanese patent No. JP 07068059 A, DETAILED ACTION]: Paper folding and origami date back hundreds of years. Origami folding instruction appears on many web sites. However, scientists are only now pushing past the obvious boundaries of construction into unobvious, hidden dimensions found 'within' the folding and in the innovative use of such media.

For example, novelty is present in Eric Demaine's world of 'computational origami' at MIT. Demaine's origami has unfolded to reveal applications of robotics, the structure of proteins in the human DNA; and the nestling of air bags in automobiles.

<http://www.sciencedaily.com/releases/2002/02/020219080203.htm>

**Paper Folding—the W Hinge and Hand Puppetry**

In the Puppetry-Based Communication System, and within the paper puppet universe world it hosts, the W hinge leads to the systematic generation of 'handheld symbolic artifacts'. The W hinge is unique as a single sheet structural system capable of maintaining and sustaining utilitarian novelty. (Paper plates and paper bags do not have the structural range, simplicity, or flexibility.) In turn, this leads to puppet concept applications as speech and language facilitation, learning receptivity, violence prevention, as well as to the overall visual-emotive-sensory-hand-actuated enhancement of communication in limitless learning settings.

In both instances, playing with paper media has enabled scientists and teachers to explore and benefit from these new pathways into complex thought and innovation based on the use of 'the obvious'.

**To Shift From Linear to Visual Communication, A Comprehensive Platform is Needed**

The Puppetry-Based Communication System is designed to meet an important educational need by providing a comprehensive training and communication system for generating, carrying, and delivering play energy and facilitating play behavior.

**The Puppetry-Based Learning System Makes Play Energy Visible**

The nature of play and its novel role in learning—beyond the commonplace early childhood use—is invisible and not anticipated. As previously stated: playful communication is at risk and its benefits are not recognized—especially in learning environments where communication is increasingly dry, linear, and unimaginative. People do not see—and therefore do not understand—that playful communication can be used successfully, for example, in a sixth-grade classroom or a college foreign language classroom. The Puppetry-Based Communication System was conceived to make the impact of such energy possible to see, model, grasp, apply, and 'materialize'.

As previously stated, the Puppetry-Based Communication System includes yet goes significantly beyond the use of standard components of a web site. It provides the basis for the user to leap from a passive craft, crayon coloring, or paper folding activity into a mode of communication capable of systemically activating classroom experience in three distinct areas usually resistant to change: behavior, communication, and content.

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The puppetry-based system generates and facilitates novel behavior, novel communication, and novel transformation of content. A flat worksheet with a printed drawing of 'the cell', for example, passes through the passive stage as a 'prop' into the interactive life form of a 'cell puppet.' The shift is achieved as novel communication results from the integral play utilities that accompany the use of the system.

To balance all the features—distance learning lab, content providers, as well as the behavioral end product—on a central paper hinge system makes for a uniformly practical and robust communication platform. The Puppetry-Based Communication System is based on the conversion of an art form that, prior to the System, could not have been harnessed and applied as a mass medium of communication.

As shown previously, the Puppetry-Based Communication System functions according to the evolutionary imperatives embodied in play behavior. With such a system, appropriate forms and levels of communicative play can be directed into the learning culture. In so doing, users of the system can grasp the special nature of play and its benefits in the form of enhanced perceptions, sensitivities, and mental literacy; and on evolutionary communication principles predicated upon the structures and physiology of the brain itself.

#### **Harnessing Play Energy**

Demand for modes of communication that have a positive impact on children and the adults in their lives are in short supply. "Our society," wrote Ernest L. Boyer, President of the Carnegie Foundation for the Advancement of Teaching, "is desperately in need of individuals who are able to look at the old and familiar in startling new ways." Puppets have always met this need, but only in limited, random ways. The Puppetry-Based Communication System provides a way to harness and apply play energy.

#### **Conclusion**

Play is a brain system that generates brain energy—reciprocal, spontaneous, and composed of behaving entities. The puppetry-based system is a communicative play generator that works on obvious components, but also on the unobvious knowledge that communicative play can be generated, multiplied, and distributed through existing web-based technology. Thus, to merge puppet play energy into the flow of electrical and digital information, in terms of a unique application of visual images as well as hand-actuated language, is an unobvious, unanticipated contribution in human communication. Without the Internet, communicative play remains a fragile, random, isolated behavior with limited reach and of minor benefit to singular users. With the Internet, the visual and communicative puppetry-based language and its implicit behavior blooms visible, robust, and predictable.

Respectfully submitted,

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**Addendum:**

Web site: <http://www.puppetools.com>

The web site is still an embryo...it looks like a pretty normal web site. But if you press one of the icons on the home page, you will see puppet concepts that are all based on the W hinge, a robust representation of symbolic life forms grown in a culture of creativity, and which provide a basis for further growth—duplicates or unique creations. There are also media clips that showcase the resulting behavior, as well as the online workshop.